

# Iowa Department of Natural Resources

## Draft Title V Operating Permit Fact Sheet

This document has been prepared to fulfill the public participation requirements of 40 CFR Part 70 and 567 Iowa Administrative Code (IAC) 22.107(6). 40 CFR Part 70 contains operating permit regulations pursuant to Title V of the Clean Air Act.

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The Iowa Department of Natural Resources (DNR) finds that:

1. POET Biorefining - Coon Rapids, located at 1015 Grand Avenue, Coon Rapids, Iowa 50058 has applied to renew their Title V Operating Permit. The designated responsible official of this facility is Patrick Lappe.
2. POET Biorefining - Coon Rapids is a Ethanol Fuel Production. This facility consists of 54 emission units with potential emissions of:

Pollutant	Abbreviation	Potential Emissions (Tons per Year)
Particulate Matter ( $\leq 2.5 \mu\text{m}$ )	PM <sub>2.5</sub>	119.17
Particulate Matter ( $\leq 10 \mu\text{m}$ )	PM <sub>10</sub>	128.37
Particulate Matter	PM	130.54
Sulfur Dioxide	SO <sub>2</sub>	2.77
Nitrogen Oxides	NO <sub>x</sub>	54.13
Volatile Organic Compounds	VOC	233.44
Carbon Monoxide	CO	31.85
Lead	Lead	0
Hazardous Air Pollutants <sup>(1)</sup>	HAP	20.05

<sup>(1)</sup> May include the following: Acetaldehyde, acrolein, arsenic, benzene, beryllium, cadmium, carbon disulfide, chromium, cobalt, cumene, ethylbenzene, formaldehyde, hexane, manganese, mercury, methanol, naphthalene, nickel, propionaldehyde, selenium, toluene, & xylenes.

3. POET Biorefining - Coon Rapids submitted a Title V Operating Permit renewal application on March 22, 2022. Based on the information provided in these documents, DNR has made an initial determination that the facility meets all the applicable criteria for the issuance of an operating permit specified in 567 IAC 22.107.
4. DNR has complied with the procedures set forth in 567 IAC 22.107, including those regarding public notice, opportunity for public hearing, and notification of EPA and surrounding state and local air pollution programs.

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DNR procedures for reaching a final decision on the draft permit:

1. The public comment period for the draft permit will run from June 9, 2022 through July 9, 2022. During the public comment period, anyone may submit written comments on the permit. Mail signed comments to Zane Peters at the DNR address shown below. The beginning date of this public comment period also serves as the beginning of the U.S. Environmental Protection Agency's (EPA) 45-day review period, provided the EPA does not seek a separate review period.
2. Written requests for a public hearing concerning the permit may also be submitted during the comment period. Any hearing request must state the person's interest in the subject matter, and the nature of the issues proposed to be raised at the hearing. DNR will hold a public hearing upon finding, on the basis of requests, a significant degree of relevant public interest in a draft permit. Mail hearing requests to Zane Peters at the DNR address shown below.
3. DNR will keep a record of the issues raised during the public participation process, and will prepare written responses to all comments received. The comments and responses will be compiled into a responsiveness summary document. After the close of the public comment period, DNR will make a final decision on the renewal application. The responsiveness summary and the final permit will be available to the public upon request.

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DNR concludes that:

1. DNR has authority under 455B.133 Code of Iowa to promulgate rules contained in 567 IAC Chapters 20-35, including, but not limited to, rules containing emission limits, providing for compliance schedules, compliance determination methods and issuance of permits.
2. DNR has the authority to issue operating permits for air contaminant sources and to include conditions in such permits under 455B.134 Code of Iowa.
3. The emission limits included in this permit are authorized by 455B.133 Code of Iowa and 567 IAC Chapters 20-35.
4. DNR is required to comply with 567 IAC Chapter 22 in conjunction with issuing a Title V Operating Permit.
5. The issuance of this permit does not preclude the DNR from pursuing enforcement action for any violation.

### **Title V Application Review Notes**

Applicant:	<b>POET Biorefining - Coon Rapids</b>
SIC Code:	2869 (Fuel Grade Ethanol Production)
City:	Coon Rapids
County:	Guthrie (FO #4)
EIQ#:	92-6922
Facility#:	39-11-001
Permit #:	07-TV-001R3
Reviewer:	Zane Peters
Date:	4/7/22

#### **Facility Identification**

Facility Name:	Tall Corn Ethanol d/b/a/ POET Biorefining - Coon Rapids
Facility Location:	1015 Grant Avenue, Coon Rapids, Iowa 50058
Responsible Official:	Patrick Lappe
Phone:	(712) 684-9201

#### **Background**

POET Biorefining - Coon Rapids is an ethanol fuel production plant (SIC 2869). The facility produces 75 million gallons of undenatured ethanol, denatured ethanol, and E-85 combined per rolling 12-month period. Co-products from the manufacture of ethanol at the facility are DDGS and wetcake.

This is the 4<sup>th</sup> issuance of the Title V Operating Permit for POET Biorefining - Coon Rapids. The application for renewal was received March 22, 2022. The facility consists of 45 emission points and 10 insignificant units.

## **Regulatory Status**

POET Biorefining - Coon Rapids is a major source for Title V. See Table 1 major source by pollutant.

**Table 1**  
**Title V major source by pollutant**

<b>Pollutant</b>	<b>Major for Title V?</b>
PM <sub>10</sub>	<input checked="" type="checkbox"/>
SO <sub>2</sub>	<input type="checkbox"/>
NO <sub>x</sub>	<input checked="" type="checkbox"/>
VOC	<input checked="" type="checkbox"/>
CO	<input checked="" type="checkbox"/>
Lead	<input type="checkbox"/>
Individual HAP	<input type="checkbox"/>
Total HAP	<input type="checkbox"/>

## **Program Applicability:**

- PSD: NO
- Part 61 NESHAP: NO
- NSPS: YES. See Table 2 below.

**Table 2**  
**NSPS Applicability**

<b>EP</b>	<b>EU</b>	<b>Source Description</b>	<b>Permit#</b>	<b>NSPS Subparts</b>
SV1	1, 2, 3	3 Corn Receiving Pits, Elevator & Conveyors, 6 Grain Bins	01-A-434-S5	A, DD
SV9	12	Boiler # 1	01-A-442-S4	A, Dc
SV10	13	Boiler #2	01-A-443-S4	A, Dc
SV11	14	Boiler #3	01-A-444-S4	A, Dc
Fugitive 2	Fugitive 2	Equipment Leaks	08-A-683-S1	A, VV
SV12	TK001	190 Proof Ethanol Tank	01-A-445-S1	A, Kb
SV13	TK002	Denaturant Tank	01-A-446-S3	A, Kb
SV14	TK003	200 Proof Ethanol Tank	01-A-447-S3	A, Kb
SV15	TK004	200 Proof Ethanol Tank	01-A-448-S3	A, Kb
SV17	TK006	Denaturant Tank	01-A-449-S3	A, Kb

Note: The boilers, EP SV9, SV10, and SV 11 burn only natural gas; therefore, there are no requirements under NSPS Subpart Dc.

## NSPS Applicability

POET Biorefining-Coon Rapids is subject to the requirements/conditions of New Source Performance Standards (NSPS) Subpart VV- *Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry* as specified in 40 CFR §60.480. However, POET Biorefining-Coon Rapids chooses to comply with the provisions of NSPS Subpart VVa, 40 CFR §60.480a to satisfy the requirements of NSPS VV. POET Biorefining-Coon Rapids is also subject to the requirements/conditions of NSPS Subpart A-*General Provisions*.

- Part 63 NESHAP: YES. See Table 3.

**Table 3**  
**Part 63 NESHAP Applicability**

EP	Source Description	Permit #	NESHAP Subparts
22	Diesel Generator	02-A-510-S4	A, ZZZZ
TK011	Gasoline Storage Tank	None	CCCCC

NOTE 1: Stack testing data provided by POET Biorefining – Coon Rapids indicated that the concentrations of acetaldehyde in the liquid and gas stream in the processes of fermentation and distillation are less than the threshold of 0.1% for NESHAP Subpart VVVVVV - National Emission Standards for *Hazardous Air Pollutants for Chemical Manufacturing Area Sources*. Therefore, this facility is not subject to the subpart.

NOTE 2: The boilers are not subject to NESHAP Subpart JJJJJ - National Emission Standards for Hazardous Air Pollutants for *Industrial, Commercial and Institutional Boilers Area Sources* because they are gas-fired.

NOTE 3: During the review period, it was discovered that EU-TK011 is subject to NESHAP Subpart CCCCC as it is a gasoline dispersal facility at an area source. This makes the EU a significant activity and has been removed for the Insignificant Activity list and added to the body of the permit. The appropriate Operating Requirements and Associated Monitoring and Recordkeeping listed in §63.11116 have been added to the permit.

- Acid Rain: NO
- Stratospheric Ozone Protection: NO
- Prevention of Accidental Releases: YES
- 112(r) Risk Management Plan: YES

## Compliance Status

The facility is in compliance.

### **Periodic Monitoring Evaluation**

EP-SV1 consists of 3 Grain Receiving Pits, Elevators and Conveyors, 6 Grain Bins, and DDGS Loadout and utilizes a baghouse (CE-CS1) to control emissions. The previous Facility Maintained O & M Plan will be upheld.

EP-SV2 consists of Corn Scalper, Elevator & Surge Bin and utilizes a pulse jet baghouse (CE-CS2) to control emissions. The previous Facility Maintained O & M Plan will be upheld.

EP-SV4 and EP-SV35 consist of fermenters, beer wells, yeast tanks, and distillation tanks and utilize scrubbers (CE-CS4 & CE-CS23) to control emissions. The calculations submitted with the permit application indicate that these emission points are subject to CAM. However, the permit does not contain formal CAM plans for these emission points since the operational requirements with associated monitoring and recordkeeping in the permit are CAM-equivalent.

EP-SV6 consists of DDGS dryers, centrifuges, and a corn oil separation system and utilizes 2 steps of control devices to control emissions. The first step is the multiclones (CE-CS6 & CE-CS7), which are pertinent to the DDGS process. The main and final pollution control device is the regenerative thermal oxidizer (CE-CS8). The previous permit required the multiclones to be subject to an Agency Approved O&M Plan. For this issuance, these requirements will be lowered to a Facility Maintained O & M Plan at the request of the facility in the Title V Permit Application Cover Letter due to the fact that the multiclones are part of the process and the RTO is the main piece of control equipment. The Facility O & M Plan will be to simply maintain the associated equipment according to the manufacturer's specifications.

EP-SV7 is a DDGS cooling cyclone that utilizes a baghouse (CE-CS9) to control emissions. The previous Facility O & M Plan will be upheld.

EP-SV8 is a DDGS storage silo that utilizes a baghouse (CE-CS10) to control emissions. The previous Facility O & M Plan will be upheld.

EP-SV25 is the general exhaust system that utilizes a pulse jet baghouse (CE-CE15) to control emissions. The previous Facility O & M Plan will be upheld.

EP-SV29, EP-SV30, EP-SV33, & EP-SV36 are hammermills that utilize pulse jet baghouses to control emissions (CE-CS19, CE-CS20, CE-CS22, CE-CS27). The calculations submitted with the permit application indicate that these emission points are subject to CAM.

EP-SV31 is a pneumatic flour conveyor/ receiver that utilizes a pulse jet baghouse (CE-CE21) to control emissions. The previous Facility O & M Plan will be upheld.

## **Stack Testing**

### **EP-SV1**

Pollutant – VOC

Stack Test to be Completed by – Once Every 3 years

Test Method - 40 CFR 63, Appendix A, Method 320 or 40 CFR 60, Appendix A, Method 18

Authority for Requirement – DNR Construction Permit 01-A-434-S5

Pollutant – HAP

Stack Test to be Completed by – Once Every 3 years

Test Method - 40 CFR 63, Appendix A, Method 320 or 40 CFR 60, Appendix A, Method 18

Authority for Requirement – DNR Construction Permit 01-A-434-S5

### **EP-SV4 & EP-SV35**

Pollutant – Volatile Organic Compounds (VOC)

Stack Test to be Completed by – Annually

Test Method - 40 CFR 63, Appendix A, Method 320, or  
40 CFR 60, Appendix A, Method 18

Authority for Requirement – DNR Construction Permits 01-A-437-S13, 17-A-066-S2

Pollutant –HAP <sup>(5)</sup>

Stack Test to be Completed by – Annually

Test Method – 40 CFR 63, Appendix A, Method 320, or  
40 CFR 60, Appendix A, Method 18

Authority for Requirement – DNR Construction Permits 01-A-437-S13, 17-A-066-S2

### **EP-SV6**

Pollutant – Particulate Matter (PM) – State

Stack Test to be Completed by – Once every 3 years

Test Method - 40 CFR 60, Appendix A, Method 5  
40 CFR 51, Appendix M, Method 202

Authority for Requirement – DNR Construction Permit 01-A-439-S12

Pollutant – Nitrogen Oxide (NO<sub>x</sub>)

Stack Test to be Completed by – Once every 3 years

Test Method - 40 CFR 60, Appendix A, Method 7E

Authority for Requirement – DNR Construction Permit 01-A-439-S12

Pollutant – Volatile Organic Compounds (VOC)

Stack Test to be Completed by – Annual

Test Method – 40 CFR 63, Appendix A, Method 320, or  
40 CFR 60, Appendix A, Method 18

Authority for Requirement – DNR Construction Permit 01-A-439-S12

Pollutant – Carbon Monoxide (CO)

Stack Test to be Completed by – Once every 3 years

Test Method - 40 CFR 60, Appendix A, Method 10  
Authority for Requirement – DNR Construction Permit 01-A-439-S12  
Pollutant –HAP  
Stack Test to be Completed by – Annual  
Test Method – 40 CFR 63, Appendix A, Method 320, or  
40 CFR 60, Appendix A, Method 18  
Authority for Requirement – DNR Construction Permit 01-A-439-S12

#### EP-SV6

Pollutant – Particulate Matter (PM<sub>10</sub>)  
Stack Test to be Completed by – Once every 3 years  
Test Method - 40 CFR 51, Appendix M, 201A with 202  
Authority for Requirement – DNR Construction Permit 01-A-440-S6

Pollutant – Particulate Matter (PM) – State  
Stack Test to be Completed by – Once every 3 years  
Test Method - 40 CFR 60, Appendix A, Method 5  
40 CFR 51, Appendix M, Method 202  
Authority for Requirement – DNR Construction Permit 01-A-440-S6

Pollutant – Volatile Organic Compounds (VOC)  
Stack Test to be Completed by – Once every 3 years  
Test Method – 40 CFR 63, Appendix A, Method 320, or  
40 CFR 60, Appendix A, Method 18  
Authority for Requirement – DNR Construction Permit 01-A-440-S6

Pollutant – Single HAP  
Stack Test to be Completed by – Once every 3 years  
Test Method – 40 CFR 63, Appendix A, Method 320, or  
40 CFR 60, Appendix A, Method 18  
Authority for Requirement – DNR Construction Permit 01-A-440-S6

Pollutant – Total HAP  
Stack Test to be Completed by – Once every 3 years  
Test Method - 40 CFR 63, Appendix A, Method 320, or  
40 CFR 60, Appendix A, Method 18  
Authority for Requirement – DNR Construction Permit 01-A-440-S6

#### EP-SV36

The previous Title V permit included the initial stack test required by the construction permit. Since this test was conducted and passed, the testing requirements have been removed from this permit.



## **Changes Made To the Title V Permit Since the Previous Issuances**

### **General Changes**

- Updated the Table of Contents
- Updated General Conditions
- Updated Plant-Wide Conditions
- Updated Internet links to Standards in the Appendix
- Updated the Facility Description and Equipment List
- Updated the Insignificant Activities List

### **Specific Changes**

- EP-SV4 – Exhaust rate updated (pp. 20)
- EP-SV6 – EP characteristics updated (pp. 25)
- EP-SV7 - EP characteristics updated (pp. 31)
- EP-SV Flare1 - EP characteristics updated (pp. 46)
- EP-SV33 & EP-SV36 - EP characteristics updated (pp. 51)
- EP-SV34 - EU-33 and EU-34 removed, EU-35 added, EP characteristics updated (pp. 60-61)
- EP-Fugitive 5 - RESCINDED